

HOLLIS et al.
Appl. No. 09/585,329
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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A-An instance of a stored data element format having a predetermined bit count, the instance representing a portion of an image, said stored data element instance comprising:
- a multi-bit alpha component field that may or may not be present in a-the particular instance of said format; and
- a portion setting forth at least one RGB color component, said portion having a first length if said multi-bit alpha component field is present and having a second length greater than said first length if said multi-bit alpha component field is not present, wherein the RGB color component portion uses the bit count otherwise available for the multi-bit alpha component to provide increased color resolution when the multi-bit alpha component field is not present.

2. (Original) A stored data element format as in claim 1 further including a flag that indicates whether said multi-bit alpha component field is present in a particular instance of said format.

Claims 3 and 4 canceled without prejudice or disclaimer.

5. (currently amended) A computer graphics system including a storage device storing plural data elements corresponding to color image elements, said data elements each setting forth RGB color information and an indicator field indicating whether or not said data element provides a further, multi-bit field encoding semi-transparency, said

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elements each having a predetermined length unaffected by whether or not they provide
said further, multi-bit field encoding semi-transparency.

6. (Original) A system as in claim 5 wherein said indicator field comprises a single bit flag.

7. (Original) A system as in claim 5 wherein ones of said plural data elements that do not encode semi-transparency use the space otherwise occupied by said multi-bit field to encode said color information at higher resolution.

8. (previously amended) A system as in claim 5 wherein said RGB color information encodes each of the three primary colors red, green and blue with the same precision.

9. (Original) A system as in claim 5 wherein each said data element has a 16-bit length, and said indicator field comprises a single bit.

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10. (Original) A system as in claim 5 wherein said multi-bit field consists of three bits.

11. (Original) A system as in claim 5 further including a data converter coupled to said storage device, said data converter converting between said multi-bit semi-transparency encoding and higher resolution alpha information.

12. (Original) A system as in claim 11 wherein said data converter quantizes or dequantizes said higher resolution alpha information in equal steps.

13. (Original) A system as in claim 11 wherein said data converter quantizes or dequantizes said higher resolution alpha information in eight equal steps.

14. (currently amended) A color image element encoding format comprising:

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an indicator field indicating whether an instance of said format is capable of encoding semi-transparency; and

at least one variable sized field setting forth RGB color information concerning said color image element, said at least one variable sized field having a first length if said indicator field indicates said format instance is incapable of encoding semi-transparency, said at least one variable sized field having a second length less than said first length if said indicator field indicates said format instance is capable of encoding semi-transparency,

wherein said format has a predetermined fixed length and the RGB color information field uses bit resolution otherwise available for encoding semi-transparency when said indicator indicates the instance does not encode semi-transparency.

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Claim 15 canceled without prejudice or disclaimer.

16. (currently amended) A color image element encoding format as in claim 14 wherein said format includes a multi-bit alpha field if said indicator field indicates said format instance is capable of encoding semi-transparency.

17. (Original) A color image element as in claim 14 wherein said color image element encoding format encodes texels.

18. (currently amended) A method of encoding an image element comprising:
(a) specifying whether said image element will encode semi-transparency;
(b) if said specifying step specifies that said image element will encode semi-transparency, allocating a set of plural bits within an RGB encoding format to encode

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alpha and using remaining bits in said format to set forth RGB color information at a first precision; and

(c) if said specifying step specifies that said image element will not encode semi-transparency, allocating said set of plural bits to set forth RGB color information at a second precision greater than said first precision,

wherein the image element overall bit length is unaffected by whether or not it encodes semi-transparency.

19. (Original) A method as in claim 18 wherein said image element comprises a texel.

20. (Original) A method as in claim 18 wherein said step (c) comprises encoding color of said image element at higher resolution through use of said set of plural bits.

21. (Original) An alpha component converter that converts between first and second resolutions of semi-transparency information, said converter quantizing or dequantizing first resolution semi-transparency information into a predetermined number of equal sized steps to form second resolution semi-transparency information.

22. (Original) The alpha component converter of claim 21 wherein the number of equal sized steps is eight.

Claim 23 canceled without prejudice or disclaimer.